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An improved anisotropic hydrodynamics ansatz HUDA ALALAWI, MICHAEL STRICKLAND, Kent State University — We introduce an improved form for the anisotropic hydrodynamics distribution function which explicitly takes into account the free-streaming and equilibrating contributions separately. We demonstrate that with this improvement one can better reproduce exact results available in the literature for the evolution of moments of the distribution function, in particular, for moments which contain no powers of the longitudinal momentum in their definition (m = 0 moments). Using the resulting dynamical equations, we extract the non-equilibrium attractor associated with our improved aHydro ansatz and demonstrate that the improvement also allows one to better reproduce the exact dynamical attractor obtained using kinetic theory in the relaxation time approximation, particularly at early rescaled times and for m = 0 moments.

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